

Application No. 10/085,288
Amendment Dated February 11, 2005
Reply to Office Action of December 13, 2004

AMENDMENTS TO THE SPECIFICATION

1.) Please replace paragraph [0001] with the following paragraph:

[0001] This application is related to co-pending application Serial No. 10/085,298 _____ (Att'y Decket No. 1787 70800), titled "Method and System for Limiting Use of Embedded Software," filed on February 28, 2002, which is and incorporated by reference as if reproduced in full below.

2.) Please replace paragraph [0035] with the following paragraph:

[0035] The preferred embodiments of the present invention are implemented in an embedded microcontroller performing gas flow metering operations. Figure 2 shows in block diagram form the preferred hardware for the embedded system. In particular, the heart of the system is the microcontroller 10. In the preferred embodiments, the microcontroller is a ~~Motorola~~ MOTOROLA® MPC862SR; however, any microcontroller or microprocessor may be equivalently used. Preferably a read only memory (ROM) device 12 couples to the microprocessor. The ROM 12 preferably contains software programs, executable by the microcontroller 10, that perform specific tasks. In particular, the ROM 12 preferably contains at least an operating system that handles low level messaging and input/output (I/O) tasks. The preferred embodiments also comprise a FLASHROM 14 coupled to the microcontroller 10. The FLASHROM 14 preferably contains software programs executable by the microcontroller 10 that implement the historical database functionality of the preferred embodiments. That is, one or more software programs on the FLASHROM 14 are executed by the microcontroller and preferably maintain the historical database of information in the battery backed static random access memory (SRAM) 16, which in

the preferred embodiments is one megabyte in size. The synchronous dynamic RAM (SDRAM) 18 also couples to the microcontroller 10 and forms the working area for the various software programs executed by the microcontroller 10.

3.) Please replace paragraph [0049] with the following paragraph:

[0049] The next step in the exemplary process of changing the number of entries in log 64 and 66 to fifteen and changing the number of entries in log 68 to ten is relocating of free space 22 to be proximate to both the log 64 and log 66. Figure 9D shows the exemplary system with the free space relocated. Finally, Figure 9E shows the completed system with log 64 and 66 now having fifteen entries, and log 68 having only ten entries. Before proceeding, it must be understood that the order in which the exemplary entries change was presented was based on clearing or creating free space 22 in the log 68, and then making that free space part of the logs 64 and 66 for their additional entries. If, however, there was sufficient free space within the system already existing, then increasing the size of entry 64 and 66 could have been done prior to shrinking the size of entry 68. As Figures 9A-9E exemplify, in the case of increasing the number of entries for a particular log, no historical data is lost; rather, additional space is created in each log for the addition of log entries. Again, however, changing the number of entries in the log 64 and 66 belonging to a first segment requires a corresponding change in the number of tag entries, since one tag entry applies to each entry in the log 64 and 66. A discussion with regard to increasing or decreasing the number of tag entries is duplicate of that presented with respect to increasing the log entries, and thus need not be presented for an understanding.

4.) Please replace the Abstract with the following paragraph:

The specification discloses a method of maintaining a historical database of information. The method describes up to eleven segments, each segment corresponding possibly to a different data logging rate in the historical database. Points, whether measured or calculated parameters, are grouped into segments based on which points may have their data logged at the same frequency. The points, in turn, contain pointers to logs, with entries in the log data corresponding to a time-stamp or tag of the segment to which the log belongs. Thus, points (and their corresponding logs) in different segments may be logged at different rates. The specification also discloses a method for dynamically resizing the historical database, ~~which, in the case of increasing the number of entries, results in no loss of historical information.~~